

REMARKS/ARGUMENTS

This Amendment & Response is intended to fully reply to the Office Action mailed August 5, 2008. In this Office Action claims 1-3, 6-8, 10, 11, 16-23 and 31-42 were examined, and all claims were rejected. More specifically, claims 1-3, 6-8, 10, 11, and 34-42 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 5,787,262 to Shakib (hereinafter “Shakib”) in view of U.S. Patent Publication No. 2004/0133652 to Miloushev (hereinafter “Miloushev”). Claims 16-23 and 31-33 were rejected under 35 U.S.C. § 103 in view of Shakib, Miloushev, and U.S. Patent No. 6,938,084 to Gamache (hereinafter “Gamache”).

Claims 1 and 34 have been amended. No claims are being canceled or newly added. Reconsideration of these rejections, as they might apply to the original claims in view of these remarks is respectfully requested.

Interview Summary

Tim Scull and Jack Bradley thank Examiner Dune Ly for the interview conducted on September 17, 2008. During the interview, Mr. Scull, Mr. Bradley, and Examiner Ly discussed the term “fence value” recited in claim 1. The Shakib and Miloushev reference were also discussed. Examiner Ly further provided his interpretation of the phrase “changing content” recited in claim 1. No agreement was reached on allowance of claims.

Claim Rejections – 35 U.S.C. § 103

Claims 1-3, 6-8, 10, 11, and 34-42 were rejected under 35 U.S.C. § 103 as being anticipated by Shakib and Miloushev. Applicants respectfully traverse this rejection because the combination of Shakib and Miloushev fails to teach fence values as claimed, and specifically fail to teach “determining whether the first fence value has precedence over the second fence value [and] based on the determining, changing content of the second member to reflect content of the first member,” as recited in claims 1 and 34.

As previously described, Shakib describes a system in which servers keep track of locally made changes to a particular copy of a replica. Each server periodically broadcasts the new locally made changes (since the last replication broadcast) to all other servers with a copy of the same replication data set. Shakib teaches that each change made to an object is uniquely

identified by a change number. That is, when a change to an object is made, a change number is assigned to the change. A change number is incremented each time a new change is made. In the event of a conflict, Shakib describes that the conflicts are resolved and result in the creation of conflict objects. Conflict objects are made from the winner object with attached conflicting objects. The office action acknowledges that Shakib does not teach a fence value as claimed. *See Office Action (August 5, 2008)*, p. 4, § 9.

To compensate for the deficiency in Shakib, the office action cites Miloushev, which describes a file switch system that distributes file storage among a number of different files. Miloushev also describes a method of locking files for client side caching, where the locking is based on byte ranges. Despite the assertions in the office action, Miloushev does not teach a fence value as claimed in the present application.

The office action cites to a portion of Miloushev that describes the use of an ordinal number that is assigned to a metaserver. Specifically, the cited portion states, in part, “[o]nce a metavolume is created, its configuration (with respect to the metaserver and directories in which the metafiles are stored) does not change. Each metaserver within the redundant metavolume is assigned an ordinal number.” *Miloushev*, paragraph [0450]. The ordinal number is merely an identifier used to identify a metaserver. Miloushev does not teach that the ordinal number is used to resolve conflicts or to determine which content has precedence during a replication process. In fact, Miloushev teaches that the content of metaservers is maintained so as to avoid conflicts. Miloushev states:

On the other hand, a destructive operation, such as a delete operation, does change the content or attributes of the metavolume, and this operation is performed on all the metaservers of the NAS array to which the metavolume has been mapped. For creating new file or lock acquisition, the operation is performed first on the primary metaserver to obtain the exclusive access to the metavolume, and then the operation is performed on all other metaservers of the metavolume.

Miloushev, paragraph [0450]. As this portion makes clear, ordinal numbers are not be used in conflict resolution scenarios because Miloushev avoids conflicts. Instead, Miloushev ensures that any operation that changes content of a metaserver is reflected on all of the metaservers mapped to the same metavolume.

In stark contrast to Miloushev, independent claims 1 and 34 recite “determining whether the first fence value has precedence over the second fence value [and] based on the determining, changing content of the second member to reflect content of the first member.” As used in these claims, a fence value is directly used to determine whether content of a member is changed. The ordinal numbers of Miloushev, which appear to do nothing more than identify metaservers, are therefore not the same as fence values. For at least these reasons, independent claims 1 and 34 are allowable over the combination of Shakib and Miloushev. Dependent claims 2, 3, 6-8, 10, 11, and 35-42 depend upon one of claims 1 and 34 and are allowable for at least the same reasons.

Claims 16-23 and 31-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shakib and Miloushev in view of Gamache. Applicants respectfully traverse this rejection because the combination of Shakib, Miloushev, and Gamache fails to teach all of the elements of the claims and specifically fails to teach the use of fence values which “indicat[e] whether its associated resource should be used to update a resource on another machine,” as recited in independent claims 16 and 31.

Neither Shakib nor Miloushev disclose fence values as they are claimed in claims 16 and 31. As noted above, the office action acknowledged that Shakib does not disclose fence values, and the ordinal numbers of Miloushev are not used to resolve conflicts but rather merely identify a metaserver. Miloushev therefore does not disclose fence values that “indicat[e] whether its associated resource should be used to update a resource on another machine” as recited in claims 16 and 31.

Gamache does not compensate for the deficiency in Shakib and Miloushev. Gamache describes a method and system for organizing a cluster of servers. Gamache does not however describe fence values, which “indicat[e] whether its associated resource should be used to update a resource on another machine” and are also “independent of any change made to content of its associated resource.”

The combination of Shakib, Miloushev, and Gamache thus does not teach all of the elements of independent claims 16 and 31, making them patentable over the combination of references. Claims 17-23, 32, and 33 depend, directly or indirectly, upon one of claims 16 and 31 and are therefore allowable for at least the same reasons.

Conclusion

This Amendment & Response fully responds to the Office Action mailed on August 5, 2008. Still, the Final Office Action may contain arguments and rejections that are not directly addressed by this Amendment & Response because they are rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Amendment & Response to directly address an argument raised in the Final Office Action should not be taken as an indication that the argument has merit. Additionally, failure to address statements/comments made by the Examiner does not mean that the Applicants acquiesce to such statements or comments. Furthermore, the claims of the present application may include other elements, not discussed in this Amendment & Response, which are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

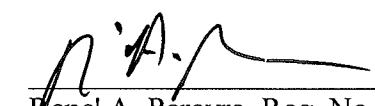
It is believed that no fees are due with this Amendment & Response. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

In light of the above remarks, it is believed that the application is now in condition for allowance and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

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